SEQUENCE LISTING

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<120> CRYSTALS OF GLUCOKINASE AND METHODS OF GROWING THEM

<130> 20892 US2

<140> 10/816,708
<141> 2004-04-02

<150> 10/318,308
<151> 2002-12-12

<150> 60/341,988
<151> 2001-12-19

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<170> PatentIn Ver. 3.3

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Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr Glu Glu His Leu
             20                  25                  30

Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys Lys Phe Glu Leu
         35                  40                  45

Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp Gly Asp Val Lys
     50                  55                  60

Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala Asp Lys His Asn
 65                  70                  75                  80

Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile Ser Met Leu Glu
                 85                  90                  95

Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg Ile Ala Tyr Ser
             100                 105                 110

Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser Lys Leu Pro Glu
         115                 120                 125
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Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys Thr Tyr Leu Asn
    130                 135                 140

Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr Asp Ala Leu Asp
145                 150                 155                 160

Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala Phe Pro Lys Leu
                165                 170                 175

Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln Ile Asp Lys Tyr
            180                 185                 190

Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln Gly Trp Gln Ala
        195                 200                 205

Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly
    210                 215                 220

Arg Gly Ile His Met Pro Arg Pro Arg Ser Gln Leu Pro Gln Pro Asn
225                 230                 235                 240

Ser Gln Val Glu Gln Ile Leu Ala Glu Phe Gln Leu Gln Glu Glu Asp
                245                 250                 255

Leu Lys Lys Val Met Arg Arg Met Gln Lys Glu Met Asp Arg Gly Leu
            260                 265                 270

Arg Leu Glu Thr His Glu Glu Ala Ser Val Lys Met Leu Pro Thr Tyr
        275                 280                 285

Val Arg Ser Thr Pro Glu Gly Ser Glu Val Gly Asp Phe Leu Ser Leu
    290                 295                 300

Asp Leu Gly Gly Thr Asn Phe Arg Val Met Leu Val Lys Val Gly Glu
305                 310                 315                 320

Gly Glu Glu Gly Gln Trp Ser Val Lys Thr Lys His Gln Met Tyr Ser
                325                 330                 335

Ile Pro Glu Asp Ala Met Thr Gly Thr Ala Glu Met Leu Phe Asp Tyr
            340                 345                 350

Ile Ser Glu Cys Ile Ser Asp Phe Leu Asp Lys His Gln Met Lys His
        355                 360                 365

Lys Lys Leu Pro Leu Gly Phe Thr Phe Ser Phe Pro Val Arg His Glu
    370                 375                 380

Asp Ile Asp Lys Gly Ile Leu Leu Asn Trp Thr Lys Gly Phe Lys Ala
385                 390                 395                 400

Ser Gly Ala Glu Gly Asn Asn Val Val Gly Leu Leu Arg Asp Ala Ile
                405                 410                 415

Lys Arg Arg Gly Asp Phe Glu Met Asp Val Val Ala Met Val Asn Asp
            420                 425                 430
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Thr Val Ala Thr Met Ile Ser Cys Tyr Tyr Glu Asp His Gln Cys Glu
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Val Gly Met Ile Val Gly Thr Gly Cys Asn Ala Cys Tyr Met Glu Glu
    450                 455                 460

Met Gln Asn Val Glu Leu Val Glu Gly Asp Glu Gly Arg Met Cys Val
465                 470                 475                 480

Asn Thr Glu Trp Gly Ala Phe Gly Asp Ser Gly Glu Leu Asp Glu Phe
                485                 490                 495

Leu Leu Glu Tyr Asp Arg Leu Val Asp Glu Ser Ser Ala Asn Pro Gly
            500                 505                 510

Gln Gln Leu Tyr Glu Lys Leu Ile Gly Gly Lys Tyr Met Gly Glu Leu
        515                 520                 525

Val Arg Leu Val Leu Leu Arg Leu Val Asp Glu Asn Leu Leu Phe His
    530                 535                 540

Gly Glu Ala Ser Glu Gln Leu Arg Thr Arg Gly Ala Phe Glu Thr Arg
545                 550                 555                 560

Phe Val Ser Gln Val Glu Ser Asp Thr Gly Asp Arg Lys Gln Ile Tyr
                565                 570                 575

Asn Ile Leu Ser Thr Leu Gly Leu Arg Pro Ser Thr Thr Asp Cys Asp
            580                 585                 590

Ile Val Arg Arg Ala Cys Glu Ser Val Ser Thr Arg Ala Ala His Met
        595                 600                 605

Cys Ser Ala Gly Leu Ala Gly Val Ile Asn Arg Met Arg Glu Ser Arg
    610                 615                 620

Ser Glu Asp Val Met Arg Ile Thr Val Gly Val Asp Gly Ser Val Tyr
625                 630                 635                 640

Lys Leu His Pro Ser Phe Lys Glu Arg Phe His Ala Ser Val Arg Arg
                645                 650                 655

Leu Thr Pro Ser Cys Glu Ile Thr Phe Ile Glu Ser Glu Glu Gly Ser
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Gly Arg Gly Ala Ala Leu Val Ser Ala Val Ala Cys Lys Lys Ala Cys
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Met Leu Gly Gln
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Leu Lys Lys Val Xaa Arg Arg Xaa Gln Lys Glu Xaa Asp Arg Gly Leu
            20                  25                  30

Arg Leu Glu Thr His Glu Glu Ala Ser Val Lys Xaa Leu Pro Thr Tyr
        35                  40                  45

Val Arg Ser Thr Pro Glu Gly Ser Glu Val Gly Asp Phe Leu Ser Leu
     50                  55                  60

Asp Leu Gly Gly Thr Asn Phe Arg Val Xaa Leu Val Lys Val Gly Glu
 65                  70                  75                  80

Gly Glu Glu Gly Gln Trp Ser Val Lys Thr Lys His Gln Thr Tyr Ser
                85                  90                  95

Ala Pro Glu Asp Ala Xaa Thr Gly Thr Ala Glu Met Leu Phe Ala Ala
            100                 105                 110
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```
Ile Ser Glu Cys Ile Ser Asp Phe Leu Asp Lys His Gln Xaa Lys His
        115                 120                 125

Lys Lys Leu Pro Leu Gly Phe Thr Phe Ser Phe Pro Val Ala His Ala
    130                 135                 140

Asp Ile Asp Ala Gly Ile Leu Leu Asn Trp Thr Lys Gly Phe Lys Ala
145                 150                 155                 160

Ser Gly Ala Glu Gly Asn Asn Val Val Gly Leu Leu Arg Asp Ala Ile
                165                 170                 175

Lys Arg Arg Gly Asp Phe Glu Xaa Asp Val Val Ala Xaa Val Asn Asp
            180                 185                 190

Thr Val Ala Thr Xaa Ile Ser Cys Tyr Tyr Glu Asp His Gln Cys Glu
        195                 200                 205

Val Gly Xaa Ile Val Gly Thr Gly Cys Asn Ala Cys Tyr Xaa Glu Glu
    210                 215                 220

Xaa Gln Asn Val Glu Leu Val Glu Gly Asp Glu Gly Arg Xaa Cys Val
225                 230                 235                 240

Asn Thr Glu Trp Gly Ala Phe Gly Asp Ser Gly Glu Leu Asp Glu Phe
                245                 250                 255

Leu Leu Glu Tyr Asp Arg Leu Val Asp Glu Ser Ser Ala Asn Pro Gly
            260                 265                 270

Gln Gln Leu Tyr Glu Lys Leu Ile Gly Gly Lys Tyr Xaa Gly Glu Leu
        275                 280                 285

Val Arg Leu Val Leu Leu Arg Leu Val Asp Glu Asn Leu Leu Phe His
    290                 295                 300

Gly Glu Ala Ser Glu Gln Leu Arg Thr Arg Gly Ala Phe Glu Thr Arg
305                 310                 315                 320

Phe Val Ser Gln Val Glu Ser Asp Thr Gly Asp Arg Lys Gln Ile Tyr
                325                 330                 335

Asn Ile Leu Ser Thr Leu Gly Leu Arg Pro Ser Thr Thr Asp Cys Asp
            340                 345                 350

Ile Val Arg Arg Ala Cys Glu Ser Val Ser Thr Arg Ala Ala His Xaa
        355                 360                 365

Cys Ser Ala Gly Leu Ala Gly Val Ile Asn Arg Xaa Arg Glu Ser Arg
    370                 375                 380

Ser Glu Asp Val Xaa Arg Ile Thr Val Gly Val Asp Gly Ser Val Tyr
385                 390                 395                 400

Lys Leu His Pro Ser Phe Lys Glu Arg Phe His Ala Ser Val Arg Arg
                405                 410                 415
```

Leu Thr Pro Ser Cys Glu Ile Thr Phe Ile Glu Ser Glu Glu Gly Ser
420 425 430

Gly Arg Gly Ala Ala Leu Val Ser Ala Val Ala Cys
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